TO DEMONSTRATE SPIROCHAETA PALLIDA

Lenartowics' Method:

1. Expose perfectly clean slide 5 seconds to the vapor of ½-2% osmic acid.
2. Cover this slide with a smear of the suspected material.
3. Fix at once in osmic vapor for not more than ten to twenty seconds.
4. When dry stain ¼ to 1 min. in Ziehl-Neelson carbol-fuchsin tubercle stain.
5. Wash in water, dry, and examine with oil-immersion.

The ground is stained red and *Spirochaeta pallida* appears unstained.

THE STUDY OF ROTIFERS

Hirschfelder (Zeitschr. Wiss. Zool. 1910, p. 211,) gives the following suggestion to students of Rotifers:

Living:

Place the animal in a drop of 1:50000 neutral red solution; support cover-glass with wax-feet; press the cover sufficiently to hold without damaging the rotifer.

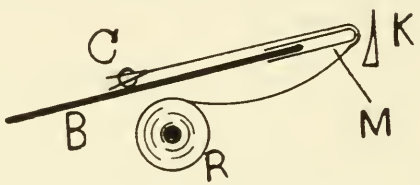
Dead:

1. Narcotize until completely extended by placing animals in 1.5 c. c. of water and adding 2 or 3 drops of Rousselet's cocaine mixture (2% cocaine hydrochloride 3 parts; 90% alcohol 1 part; water 6 parts). Let this act about one quarter hour, without agitating the material.
2. Apply a drop of 1% osmic acid. Let this act about ten minutes.
3. Transfer to distilled water for five minutes.
4. Transfer to 2% formalin.

A PAPER RIBBON-CARRIER.

A simpler and much more convenient ribbon-carrier than those furnished with rotary microtomes has proven very useful in this laboratory. Instead of an endless band for carrying the paraffin ribbon, a roll of narrow cash-register paper is used. When a ribbon

is complete or reaches an inconvenient length, the paper carrying it is cut from the roll and may be carried about or stored without disturbing the ribbon on it. The apparatus may be pushed from the microtome (while the paraffin block is being adjusted) without injuring the ribbon already cut.



Legend: B, board; C, paper-clamp; K, knife; M, metal "U;" R, paper.

The thin board, about 15x30 cm., and the rod on which the roll of paper revolves, are clamped to a ringstand set on the table. On the upper end of the board is slipped a tight-fitting "U," made from a strip of sheet-metal 5 cm. wide, which extends between the two uprights of the knife clamp. The end of the paper is brought up around the curve of this "U" and weighted with a paper clamp. When the ribbon reaches the end of the board it may be extended on the table. —LABORATORY NEBRASKA WESLEYAN UNIVERSITY.

SAFETY-RAZOR MICROTOME BLADES

B. H. Bentley (Ann. Bot., January, 1911) recommends the use of the Gillette safety razor blades in microtome work. By the use of suitable steel supports he builds up a composite blade which has the merit of such great cheapness that it can be discarded and replaced by another when dulled. They are therefore to be specially recommended when large classes are to be taught the use of the microtome, or where hard and gritty objects are to be sectioned.

It is claimed that the results obtained compare favorably with those obtained by the use of regular blades.